

1 SEQUENCE LISTING

<110> HEINZEL, THORSTEN
KRAEMER, OLIVER H.
GOETTLICHER, MARTIN
ZHU, PING
GOLBBIEWSKI, MARTIN
PELICCI, PIER
MAURER, ALEXANDER
HENTSCH, BERND

MINUCCI, SAVERIO

<120> THE USE OF MOLECULAR MARKERS FOR THE PRECLINICAL AND CLINICAL PROFILING OF INHIBITORS OF ENZYMES HAVING HISTONE DEACETYLASE ACTIVITY

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<140> 10/528.104

<141> 2005-09-28

<150> PCT/EP03/10404

<151> 2003-09-18

<150> EP 02021228.8 <151> 2002-09-18

<160> 16

<170> PatentIn Ver. 3.3

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<212> PRT

<213> Homo sapiens

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Tyr Arg Lys Met Glu Ile Tyr Arg Pro His Lys Ala Thr Ala Glu Glu 50 55 60

Met Thr Lys Tyr His Ser Asp Glu Tyr Ile Lys Phe Leu Arg Ser Ile 65 70 75 80

Arg Pro Asp Asn Met Ser Glu Tyr Ser Lys Gln Met His Ile Phe Asn 85 90 95

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Gln Thr Asp Met Ala Val Asn Trp Ala Gly Gly Leu His His Ala Lys 130 135 140

Lys Tyr Glu Ala Ser Gly Phe Cys Tyr Val Asn Asp Ile Val Leu Ala 145 $$ 150 $$ 155 $$ 160

Ile Leu Glu Leu Leu Lys Tyr His Gln Arg Val Leu Tyr Ile Asp Ile 165 170 175

Asp Ile His His Gly Asp Gly Val Glu Glu Ala Phe Tyr Thr Thr Asp 180 185 190

Arg Val Met Thr Val Ser Phe His Lys Tyr Gly Glu Tyr Phe Pro Gly

Thr Gly Asp Leu Arg Asp Ile Gly Ala Gly Lys Gly Lys Tyr Tyr Ala 210 215 220

Val Asn Phe Pro Met Cys Asp Gly Ile Asp Asp Glu Ser Tyr Gly Gln 225 230 235

Ala Val Val Leu Gln Cys Gly Ala Asp Ser Leu Ser Gly Asp Arg Leu 260 265 270

Gly Cys Phe Asn Leu Thr Val Lys Gly His Ala Lys Cys Val Glu Val 275 280 285

Val Lys Thr Phe Asn Leu Pro Leu Leu Met Leu Gly Gly Gly Tyr 290 295 300

Thr Ile Arg Asn Val Ala Arg Cys Trp Thr Tyr Glu Thr Ala Val Ala 305 $$ 310 $$ 315 $$ 320

Leu Asp Cys Glu Ile Pro Asn Glu Leu Pro Tyr Asn Asp Tyr Phe Glu 325 330 335

Tyr Phe Gly Pro Asp Phe Lys Leu His Ile Ser Pro Ser Asn Met Thr 340 345 350

Asn Gln Asn Thr Pro Glu Tyr Met Glu Lys Ile Lys Gln Arg Leu Phe 355 360 365

Glu Asn Leu Arg Met Leu Pro His Ala Pro Gly Val Gln Met Gln Ala 370 375 380

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Asp Pro Asp Lys Arg Ile Ser Ile Arg Ala Ser Asp Lys Arg Ile Ala 405 410 415 Cys Asp Glu Glu Phe Ser Asp Ser Glu Asp Glu Gly Glu Gly Arg
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Arg Asn Val Ala Asp His Lys Lys Gly Ala Lys Lys Ala Arg Ile Glu 435 440 445

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Gly Val Trp Lys Val Arg Val Asp Leu Pro Asp Lys Tyr Pro Phe Lys 50 55 60

Ser Pro Ser Ile Gly Phe Met Asn Lys Ile Phe His Pro Asn Ile Asp 65 70 75 80

Glu Ala Ser Gly Thr Val Cys Leu Asp Val Ile Asn Gln Thr Trp Thr $85 \ 90 \ 95$

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Met Tyr Leu His Arg Pro Glu Glu Tyr Lys Gln Lys Ile Lys Glu Tyr 130 135 140

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Ser 145	Asn	Asn	Gly	Ser	Gln 150	Asn	Ser	Glu	Asn	Glu 155	Asn	Glu	Pro	Ser	Al:
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Glu	Asn	Pro	Arg 180	Ser	Glu	Ser	Thr	Ser 185	Ala	Arg	Pro	Ser	Arg 190	Ser	Gli
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Asn Glu Thr Glu Gly Ser Ser Arg Thr Arg His His Val Thr Leu Arg $260 \hspace{1.5cm} 265 \hspace{1.5cm} 265 \hspace{1.5cm} 270 \hspace{1.5cm}$

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Ser Gly Thr Arg Asn Ala Ser Gln Gly Ala Gly Ser Ser Asp Thr Ala 290 295300

Ala Ser Gly Glu Ser Thr Gly Ser Gly Gln Arg Pro Pro Thr Ile Val 305 \$310\$ 315 \$320

Leu Asp Leu Gln Val Arg Arg Val Arg Pro Gly Glu Tyr Arg Gln Arg 325 330 335

Asp Ser Ile Ala Ser Arg Thr Arg Ser Arg Ser Gln Thr Pro Asn Asn 340 345 350

Thr Val Thr Tyr Glu Ser Glu Arg Gly Gly Phe Arg Arg Thr Phe Ser

Arg Ser Glu Arg Ala Gly Val Arg Thr Tyr Val Ser Thr Ile Arg Ile 370 375. 380.

Pro Ile Arg Arg Ile Leu Asn Thr Gly Leu Ser Glu Thr Thr Ser Val 385 $$ 390 $$ 400

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Ser Tyr Phe Met Tyr Ser Asp Ser Asp Ser Glu Pro Thr Gly Ser Val

Ser Asn Arg Asn Met Glu Arg Ala Glu Ser Arg Ser Gly Arg Gly Gly 435 440 445

Ser Gly Gly Glu Ser Ser Glu Thr Ser Ser Asp Leu Phe Glu Gly Ser 485 490 495

Asn Glu Gly Ser Ser Ser Ser Gly Ser Ser Gly Ala Arg Arg Glu Gly $500 \hspace{1.5cm} 505 \hspace{1.5cm} 510 \hspace{1.5cm}$

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Leu Ser Leu Ala Gln Phe Phe Leu Leu Asn Glu Asp Asp Asp Gln 530 535 540

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Phe Gly Glu Asn Asp Ala Leu Lys Thr Cys Ser Val Cys Ile Thr Glu 565 570 575

Tyr Thr Glu Gly Asn Lys Leu Arg Lys Leu Pro Cys Ser His Glu Tyr 580 585 590

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Tyr Ser Lys Ser Gly Ile Ala Cys Phe Leu Lys Glu Asp Asp Ser Tyr 50 55

Trp Asp Pro Asn Asp Glu Glu Ser Met Asn Ser Pro Cys Trp Gln Val 65 70 75 80

Lys Trp Gln Leu Arg Gln Leu Val Arg Lys Met Ile Leu Arg Thr Ser

85 90 95
Glu Glu Thr Ile Ser Thr Val Gln Glu Lys Gln Gln Asn Ile Ser Pro

Leu Val Arg Glu Arg Gly Pro Gln Arg Val Ala Ala His Ile Thr Gly

Thr Arg Gly Arg Ser Asn Thr Leu Ser Ser Pro Asn Ser Lys Asn Glu

Lys Ala Leu Gly Arg Lys Ile Asn Ser Trp Glu Ser Ser Arg Ser Gly

His Ser Phe Leu Ser Asn Leu His Leu Arg Asn Gly Glu Leu Val Ile 165 170 175

His Glu Lys Gly Phe Tyr Tyr Ile Tyr Ser Gln Thr Tyr Phe Arg Phe \$180\$ 185 \$190

Gln Glu Glu Ile Lys Glu Asn Thr Lys Asn Asp Lys Gln Met Val Gln 195 200 205 Tyr Ile Tyr Lys Tyr Thr Ser Tyr Pro Asp Pro Ile Leu Leu Met Lys 210 215 220

Ser Ala Arg Asn Ser Cys Trp Ser Lys Asp Ala Glu Tyr Gly Leu Tyr 225 230 235 240

Ser Ile Tyr Gln Gly Gly Ile Phe Glu Leu Lys Glu Asn Asp Arg Ile 245 250 255

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